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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/670,981 | 09/25/2003 | Harry Eugene Flynn | TRX06-01 (1097) | 8092 |

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| EXAMINER |
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HEWITT, JAMES M

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| ART UNIT | PAPER NUMBER |
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3679

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06/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/670,981 | FLYNN ET AL. | |
| | Examiner | Art Unit | |
| | James M. Hewitt | 3679 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/28/06 & 1/25/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-14, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-14, 28 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In view of the appeal brief filed on 1/25/07, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

A handwritten signature in black ink that reads "Daniel P. Stodola". The signature is written in a cursive style with a large initial 'D'.

DANIEL P. STODOLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3800

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cocchiara et al (US 4,301,651) in view of Jacocks (US 2,226,494) and further in view of Carty et al (US 4,554,721).

With respect to claim 12 and with reference to FIG. 13, Cocchiara et al discloses a piping elbow, comprising: a substantially cylindrical body having a first end (37) and a second end (38) and wherein the body contains a liner (40, 41, 42); a tangential inlet (33) attached to the body near the first end having a diameter smaller than the diameter of the body, wherein the tangential inlet contains a liner (see FIG. 13); and a tangential outlet (35) attached to the body near the second end having a diameter smaller than the diameter of the body, wherein the tangential outlet contains a liner (see FIG. 13).

Cocchiara et al fails to teach that at least one of the first and second ends of the body are removably attached. Rather, the first end (37) and second end (38) are said to be welded to the reactor. Jacocks teaches a high-pressure/high-temperature vessel having at least one inlet and outlet and having first and second ends each having a cover that is removably attached via adjustable screw means, thus allowing access to the vessel interior. The covers are of a smaller diameter than that of the vessel body thereby eliminating flanges and reducing cost. The covers are also sealed by a gasket

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to seal and hold the cover against internal pressure. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Cocchiara et al's device to have removable ends as taught by Jacocks in order to permit access to the interior of the body. Cocchiara et al fails to teach that the liners for the body, inlet and outlet are removable. Cocchiara et al teaches that the liners are secured by crimping or expansion into contact with the reactor wall. Cocchiara et al though states that the liners may be attached by any other suitable method. Carty et al teaches that is known to provide an elbow with a replaceable ceramic liner (column 4, lines 27-32, column 2, lines 50-55) for wear resistance of the fluids on the elbow body. The liner is attached to the interior of the pipe body via a bedding (16). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to replace Cocchiara et al's stainless steel liners with removable ceramic liners in order to easily replace worn liners and to reduce cost and weight.

With respect to claim 13, the method of forming the device is not germane to the issue of patentability of the device itself. A product must structurally distinguish from the prior art. Cocchiara et al meets the claim insofar as the tangential inlet liner and the tangential outlet liner are disposed in a cavity in the body liner. As shown in FIG. 13 and described in col. 8, ll. 49-53, inlet and outlet liners 42 extend into body liner 40 (note the darkened line representing liner 42 that extends into body liner 40).

Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cocchiara et al (US 4,301,651) in view of Carty et al (US 4,554,721), and further in view of Forman (US 255,427).

With respect to claim 28 and with reference to FIG. 13, Cocchiara et al discloses a piping elbow, comprising: a substantially cylindrical body having a first end (37) and a second end (38) and wherein the body contains a liner (40, 41, 42); a tangential inlet (33) attached to the body near the first end having a diameter smaller than the diameter of the body, wherein the tangential inlet contains a liner (see FIG. 13); and a tangential outlet (35) attached to the body near the second end having a diameter smaller than the diameter of the body, wherein the tangential outlet contains a liner (see FIG. 13).

Cocchiara et al fails to teach that the liners for the body, inlet and outlet are removable. Cocchiara et al teaches that the liners are secured by crimping or expansion into contact with the reactor wall. Cocchiara et al though states that the liners may be attached by any other suitable method. Carty et al teaches that is known to provide an elbow with a replaceable ceramic liner (column 4, lines 27-32, column 2, lines 50-55) for wear resistance of the fluids on the elbow body. The liner is attached to the interior of the pipe body via a bedding (16). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to replace Cocchiara et al's stainless steel liners with removable ceramic liners in order to easily replace worn liners and to reduce cost and weight. Cocchiara et al fails to teach that the elbow comprises two substantially-identical components, wherein each component includes: a substantially cylindrical body section having a first end and an open second end; a

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tangential inlet or tangential outlet attached to the body section near the first end, the tangential inlet or tangential outlet containing a removable liner wherein the second ends of the two components are removably attached to each other. Forman teaches that it is known in the art to provide a pipe joint comprising two substantially identical body portions each having a branch pipe connected thereto. The body portions are removably attached to one another as at E and F. Forming the joint in this manner permits the body portions to be relatively adjusted to permit the branch pipes to be oriented at various angles. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form Cocchiara's body in two halves in order to permit the tangential pipes to be oriented at various relative angles.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that there is no suggestion to combine Cocchiara et al and Forman, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case,

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the motivation is found in Forman. Forman teaches that it is known in the art to provide a pipe joint comprising two substantially identical body portions each having a branch pipe connected thereto, wherein the body portions are removably attached to one another. Forming the joint in this manner permits the body portions to be relatively adjusted to permit the branch pipes to be oriented at various angles.

In response to applicant's argument that Forman does not teach or suggest a substantially cylindrical body section or a tangential inlet/outlet, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Conclusion

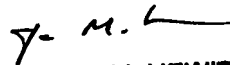
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Hewitt whose telephone number is 571-272-7084.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMH
5/28/07


JAMES M. HEWITT
PRIMARY EXAMINER